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## Chapter 5 Lane Information Input

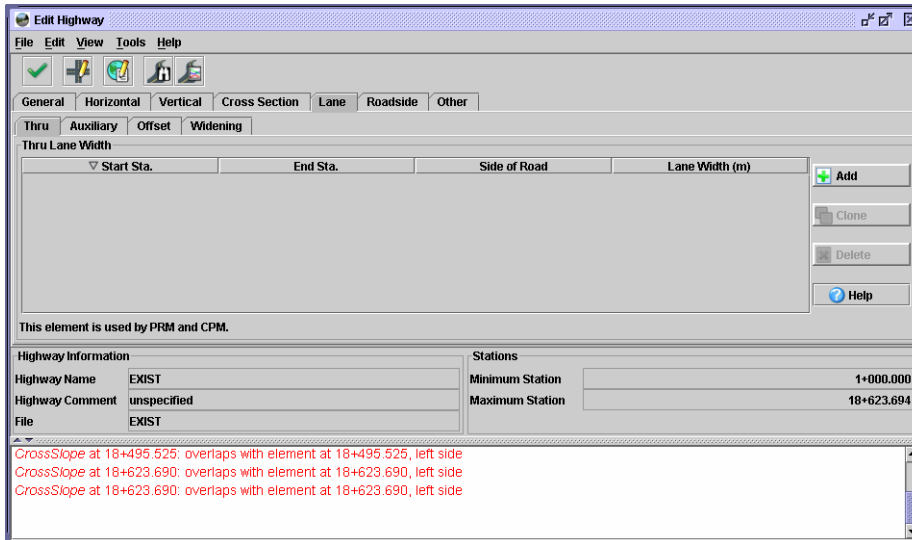
From the Lane Information tab in the Edit/View Highway Data dialog box the following information may be input:

- Through Lane widths.
- Passing Lane widths and locations
- Turn Lane widths and locations
- Two-way Left Turn widths and locations
- Climbing Lane widths and locations
- Divided highway offset widths and locations
- Curve widening widths and locations

The following workflows will guide the user on how to input each set of data using IHSDM. The title of the workflow will also indicate the modules that use that data in parenthesis. Therefore, if the user does not want a certain module, they will not waste time importing data that is not needed.

### Workflow 1: Through Lane Widths (PRM, CPM, IRM)

1. Pick the Edit Highway button  while in the Main IHSDM Dialog box. This dialog box is shown in step 16 of [workflow 2 in chapter 2](#).
2. Click on the Lane>Thru tab and the following dialog box will appear:



The screenshot shows the 'Edit Highway' dialog box with the 'Lane' tab selected and the 'Thru' sub-tab active. The main area contains a table for 'Thru Lane Width' with columns: Start Sta., End Sta., Side of Road, and Lane Width (m). To the right of the table are buttons for 'Add', 'Clone', 'Delete', and 'Help'. Below the table, a note states 'This element is used by PRM and CPM.' At the bottom of the dialog, there are two sections: 'Highway Information' and 'Stations'. The 'Highway Information' section includes fields for Highway Name (EXIST), Highway Comment (unspecified), and File (EXIST). The 'Stations' section includes fields for Minimum Station (1+000.000) and Maximum Station (18+623.694). At the very bottom, there are three red error messages: 'CrossSlope at 18+495.525: overlaps with element at 18+495.525, left side', 'CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side', and 'CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side'.

3. Pick the Add button at the right of the dialog box and the Row will be populated with data fields for the Start Sta., End Sta., Side of Road and Lane Width. Double click the Start Sta. data field to enter the starting station for the lane width, tab to the End Sta. data field to enter the end station for the lane width. Use the pull down menu to pick the side of the road for the lane width. Tab to

*the Lane width data field to fill in the lane width. To add another line, pick Add again.*

Start Sta.	End Sta.	Side of Road	Lane Width (m)
1+000.000	9+500.000 both		3.60
9+500.000	18+623.694 both		3.30

Highway Information  
 Highway Name: EXIST  
 Highway Comment: unspecified  
 File: EXIST

Stations  
 Minimum Station: 1+000.000  
 Maximum Station: 18+623.694

CrossSlope at 18+495.525: overlaps with element at 18+495.525, left side  
 CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side  
 CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side

## Workflow 2: Passing Lane Width and Location (PRM, CPM, TAM, IRM)

1. Click on the Lane>Auxiliary>Passing Tab of the Edit Highway dialog box to get the following dialog box:

Start Sta.	End Sta.	Side of Road	Lane Width (m)	Begin Full Width	End Full Width	Passing Prohibite...
------------	----------	--------------	----------------	------------------	----------------	----------------------

Highway Information  
 Highway Name: EXIST  
 Highway Comment: unspecified  
 File: EXIST

Stations  
 Minimum Station: 1+000.000  
 Maximum Station: 18+623.694

CrossSlope at 18+495.525: overlaps with element at 18+495.525, left side  
 CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side  
 CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side

2. Pick the Add button at the right of the dialog box and the Row will be populated with data fields for the Start Sta., End Sta., Side of Road, Lane Width, Begin Full Width, End Full Width and Passing Prohibited on Opposing Lanes. Double click the Start Sta. data field to enter the starting station for the transition to the passing lane width, tab to the End Sta. data field to enter the end station for transition back to no passing lane. Use the pull down menu to pick the side the passing lane is on. Tab to Lane Width to enter the width of the passing lane. Tab to begin full width to enter the

station that the passing lane begins, tab to End Full Width to enter the last station that the passing lane is at full width. Tab to Passing Prohibited on Opposing Lanes and enter True or False depending whether the statement is true or not. To add another line, pick Add again.

The screenshot shows the 'Edit Highway' dialog box with the 'Lane' tab selected. The 'Passing Lane Width' section is active, displaying a table with the following data:

Start Sta.	End Sta.	Side of Road	Lane Width (m)	Begin Full Width	End Full Width	Passing Prohibited
1+330.000	1+520.000	right	3.60	1+380.000	1+470.000	false

Buttons for 'Add', 'Clone', 'Delete', and 'Help' are visible on the right. Below the table, it states 'This element is used by PRM and CPM.' The bottom section contains 'Highway Information' and 'Stations' fields.

## Workflow 3: Turn Lane Width and Location (PRM, DCM, IRM)

1. Click on the Lane>Auxiliary>Turn Tab of the Edit Highway dialog box to get the following dialog box:

The screenshot shows the 'Edit Highway' dialog box with the 'Lane' tab selected. The 'Turn Lane Width' section is active, displaying a table with the following data:

Start Sta.	End Sta.	Side of Road	Lane Width (m)	Begin Full Width	Turn Lane Type	Taper Type	Taper Tangent ...
------------	----------	--------------	----------------	------------------	----------------	------------	-------------------

Buttons for 'Add', 'Clone', 'Delete', and 'Help' are visible on the right. Below the table, it states 'This element is used by PRM, CPM and IRM.' The bottom section contains 'Highway Information' and 'Stations' fields.

2. Pick the Add button at the right of the dialog box and the Row will be populated with data fields for the Start Sta., End Sta., Side of Road, Lane Width, Begin Full Width, End Full Width, Turn Lane

*Type, Taper Type and Taper Tangent Length. Double click the Start Sta. data field to enter the starting station for the transition to the turn lane, tab to the End Sta. data field to enter the end station for the turn lane. Use the pull down menu to pick the side the turn lane is on. Tab to Lane Width to enter the width of the turn lane. Tab to begin full width to enter the station that the turn lane begins. The Turn Lane Type is a pull down menu that allows the user to choose either a right or left turn. The Taper Type is a pull down menu that allows the user to choose between straight line, partial tangent, symmetrical reverse curve, or asymmetrical reverse curve. Tab to the Taper Tangent Length to enter the length of tangent to use for the partial tangent taper type. To add another line, pick Add again.*

The screenshot shows the 'Edit Highway' dialog box with the 'Lane' tab selected. The 'Turn Lane Width' section contains one entry with the following data:

Start Sta.	End Sta.	Side of Road	Lane Width (m)	Begin Full Width	Turn Lane Type	Taper Type	Taper Tangent ...
2+300.000	2+340.000	both	3.60	2+310.000	left	straight line	0.00

Buttons for 'Add', 'Clone', 'Delete', and 'Help' are visible on the right. Below the table, it states 'This element is used by PRM, CPM and IRM.' The bottom section shows 'Highway Information' and 'Stations'.

## Workflow 4: Two Way Left Turn Lanes (PRM, CPM, IRM)

1. Click on the Lane>Auxiliary>Two-way Left Turn Tab of the Edit Highway dialog box to get the following dialog box:

The screenshot shows the 'Edit Highway' dialog box with the 'Lane' tab selected. The 'Two-way Left Turn Lane Width' section is active, showing a table with columns for Start Sta., Start Centerline Of..., Begin Full Width, Lane Width (m), End Full Width, End Centerline Off..., and End Sta. The table is currently empty. Buttons for 'Add', 'Clone', 'Delete', and 'Help' are visible on the right. Below the table, it states 'This element is used by CPM.' The bottom section shows 'Highway Information' and 'Stations'.

2. Pick the Add button at the right of the dialog box and the Row will be populated with data fields for the Start Sta., Start Centerline Offset, Begin Full Width, Lane Width, End Full Width End Centerline Offset and End Sta. Double click the Start Sta. data field to enter the starting station for the transition to the two way left turn lane, tab to the Start Centerline Offset to enter the offset value for the two way left turn lane, use a negative sign for the left side of the centerline and a positive value for the right side of the centerline. Tab to the Begin Full Width to enter the station that the taper to the two way left turn lane ends. Tab to Lane Width to enter the width of the two way left turn lane. Tab to the End Full Width to enter the station that the two way left turn lane ends. Tab to the End Centerline Offset to enter the offset value for the two way left turn lane. Tab to the End Sta. data field to enter the end station for taper from the two way left turn lane. To add another line, pick Add again.

**Edit Highway**

File Edit View Tools Help

General Horizontal Vertical Cross Section Lane Roadside Other

Thru Auxiliary Offset Widening

Passing Turn Two-way Left Turn Climb

Two-way Left Turn Lane Width

Start Sta.	Start Centerline Off...	Begin Full Width	Lane Width (m)	End Full Width	End Centerline Off...	End Sta.
4+500.000	0.00	4+520.000	3.60	4+600.000	0.00	4+620.000

Buttons: Add, Clone, Delete, Help

This element is used by CPM.

**Highway Information**

Highway Name: EXIST  
Highway Comment: unspecified  
File: EXIST

**Stations**

Minimum Station: 1+000.000  
Maximum Station: 18+623.694

CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side  
CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side

The value for the Lane Width field is invalid: 2+310; illegal numeric value: 2+310

## Workflow 5: Climbing Lane Width and Location (PRM, CPM, TAM, IRM)

1. Click on the Lane>Auxiliary>Climb Tab of the Edit Highway dialog box to get the following dialog box:

**Edit Highway**

File Edit View Tools Help

General Horizontal Vertical Cross Section Lane Roadside Other

Thru Auxiliary Offset Widening

Passing Turn Two-way Left Turn Climb

Climb Lane Width

Start Sta.	End Sta.	Side of Road	Lane Width (m)	Begin Full Width	End Full Width	Passing Prohibited...
			2+310			

This element is used by PRM.

Highway Information

Highway Name	EXIST
Highway Comment	unspecified
File	EXIST

Stations

Minimum Station	1+000.000
Maximum Station	18+623.694

CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side  
CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side

The value for the Lane Width field is invalid: 2+310; illegal numeric value: 2+310

- Pick the Add button at the right of the dialog box and the Row will be populated with data fields for the Start Sta., End Sta., Side of Road, Lane Width, Begin Full Width, End Full Width and Passing Prohibited on Opposing Lanes. Double click the Start Sta. data field to enter the starting station for the transition to the climbing lane width, tab to the End Sta. data field to enter the end station for transition back to no climbing lane. Use the pull down menu to pick the side the climbing lane is on. Tab to Lane Width to enter the width of the climbing lane. Tab to begin full width to enter the station that the climbing lane begins, tab to End Full Width to enter the last station that the climbing lane is at full width. Tab to Passing Prohibited on Opposing Lanes and enter True or False depending whether the statement is true or not. To add another line, pick Add again.

## Workflow 6: Offset (PRM, IRM)

- Click on the Lane>Offset tab of the Edit Highway dialog box to get the following dialog box:

File Edit View Tools Help

General Horizontal Vertical Cross Section Lane Roadside Other

Thru Auxiliary Offset Widening

Lane Offset Width

Start Sta.	End Sta.	Side of Road	Full Offset (m)	Begin Full Width	End Full Width
<div style="text-align: right;"> + Add  Clone  Delete  Help </div>					

This element is used by IRM.

Highway Information

Highway Name	EXIST	Minimum Station	1+000.000
Highway Comment	unspecified	Maximum Station	18+623.694
File	EXIST		

CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side  
CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side

The value for the Lane Width field is invalid: 2+310; illegal numeric value: 2+310

2. Pick the Add button at the right of the dialog box and the Row will be populated with data fields for the Start Sta., End Sta., Side of Road, Full Offset, Begin Full Width and End Full Width. Double click the Start Sta. data field to enter the starting station for the transition to the offset of the inside lane to the centerline. Tab to End Sta. to enter the station that the transition to no offset ends. Use the pull down menu to enter the side of road the offset is on. Tab to Full Offset to enter the width of the offset. Tab to Begin Full Width and End Full Width to enter the stations that the full width of the offset begins and ends on. To add another line, pick Add again.

## Workflow 7: Curve Widening (PRM)

1. Click on the Lane>Widening Tab of the Edit Highway dialog box to get the following dialog box:

File Edit View Tools Help

General Horizontal Vertical Cross Section Lane Roadside Other

Thru Auxiliary Offset Widening

Curve Widening

Start Sta.	End Sta.	Side of Road	Widening (m)	Begin Full Width	End Full Width
<div style="text-align: right;"> + Add  Clone  Delete  Help </div>					

This element is used by PRM.

Highway Information

Highway Name	EXIST	Minimum Station	1+000.000
Highway Comment	unspecified	Maximum Station	18+623.694
File	EXIST		

CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side  
CrossSlope at 18+623.690: overlaps with element at 18+623.690, left side

The value for the Lane Width field is invalid: 2+310; illegal numeric value: 2+310



- Pick the Add button at the right of the dialog box and the Row will be populated with data fields for the Start Sta., End Sta., Side of Road, Widening, Begin Full Width and End Full Width. Double click the Start Sta. data field to enter the starting station for the transition to the widening. Tab to End Sta. to enter the station that the transition to no widening ends. Use the pull down menu to enter the side of road the widening is on. Tab to Widening to enter the width of the widening. Tab to Begin Full Width and End Full Width to enter the stations that the full width of the widening offset begins and ends on. To add another line, pick Add again.*

## Using an Excel file

The Excel file with the correct format for importing Lane Information into IHSDM is DEA.Lane.xls. This file can be found in:

N:\Standards\IHSDM\

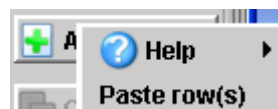
or on the CFLHD web site at the following link:

<http://www.cflhd.gov/ihsdm.cfm>

When you open this file, there is a read me worksheet along with 7 worksheets that will be used to input all the Lane information. Each worksheet will describe what each variable is and what it is used for. The following workflow will describe the process for entering this information into IHSDM.

## Workflow 8: Excel Input

- Enter the correct data in the Excel spreadsheet.*
- Highlight the entered data and go to Edit>Copy.*
- Click on the General Tab of the Edit Highway dialog box.*
- Pick the corresponding tab for the data to be inserted.*
- Move the mouse over the Add button and right click the mouse to get the following:*



- Choose Paste row(s). The information will be loaded into IHSDM.*
- Delete the line with the incorrect data.*



Notice that this procedure is most useful when there are more than a couple of lines of data.